



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,657	11/25/2003	Siddhartha Panda	FIS920030133US1	7420
28264	7590	06/29/2006	EXAMINER	
BOND, SCHOENECK & KING, PLLC ONE LINCOLN CENTER SYRACUSE, NY 13202-1355			VINH, LAN	
			ART UNIT	PAPER NUMBER
			1765	
DATE MAILED: 06/29/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,657

Applicant(s)

PANDA ET AL.

Examiner

Lan Vinh

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 012503.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, drawn to a method for improving uniformity of plasma etching, classified in class 438, subclass 710.
- II. Claims 11-17, drawn to a filter for reducing non-uniformity in a plasma etching, classified in class 156, subclass 345.3.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process such as a plasma-enhanced high density chemical vapor deposition

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with George McGuire on 6/20/2006 a provisional election was made with traverse to prosecute the invention of Group II, claims 11-17.

Art Unit: 1765

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 1-10 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by

Canteloup (US 5,748,296)

Canteloup discloses a method and device for in-situ quantification by reflectometry of a region during plasma etching. The device comprises a filter 23, the filter 23 is transparent for a characteristic wavelength band and opaque for the other wavelengths (col 3, lines 60-65, col 4, lines 1-4; Fig. 2 of Canteloup shows that the optical signals are passed/transmitted through a center region of the filter 23, which reads on a filter

Art Unit: 1765

comprising a first region having a first transmittance and a second region having second transmittance that is different than said first transmittance level.

Regarding claims 12-13, Fig. 2 of Canteloup shows that the optical signal is passed through a center portion of the filter/second portion; however, the optical signal is not passed through the perimeter region/first region of the filter, which reads on the first transmittance of the first region is lower than the second transmittance.

Regarding claim 14, Fig. 2 and 3c of Canteloup shows that the filter 23 is inherently a ring-like filter, which reads on the first region and second region of the filter are eccentric.

Regarding claim 15, since Canteloup discloses the same filter having the same first and second regions for transmittance of infrared light during plasma etching as the claimed filter under the principle of inherency, Canteloup second region is positioned to reduce transmission in areas where said plasma etching process experiences magnetic filed cusping

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Canteloup (US 5,748,296) in view of Mathies et al (US 6,867,420)

Art Unit: 1765

Cantaloup filter has been described above. Unlike the instant claimed inventions as per claims 16-17, Cantaloup fails to disclose that the filter comprises optical quality glass having a layer of metallic coating of a predetermined thickness, the thickness of said layer of metallic coating varies from the first to the second region although Cantaloup discloses that the filter 23 is transparent

Mathies discloses an optical system comprises a optical interference filter 22, the filter is formed by depositing TiO/metallic coating layer 32 of selected thickness on a quartz or glass substrate (col 3, lines 57-61)

Thus, one skilled in the art at the time the invention was made would have found it obvious to modify Cantaloup filter by using a filter comprising optical quality glass having a layer of metallic coating of a predetermined thickness to form a metal light shield in order to minimize the effect of laser scattered light as taught by Mathies (col 4, lines 45-52)

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471.

The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1765

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LV

June 20, 2006